

WHAT IS CLAIMED IS:

- Sub A1
1. A method for sorting objects having machine-readable indicia thereon, comprising the steps of:
- capturing object information from the machine-readable indicia on an object;
- determining routing information from the object information;
- determining, based on the routing information, a correct sort destination for the object;
- and
- generating a visual and/or audio command identifying the correct sort destination for the object.
2. The method of claim 1, wherein the object information is captured as the object moves on a conveyor belt.
3. The method of claim 1, wherein the object information is captured as the object moves with manual assistance.
4. The method of claim 1, further comprising the step of measuring the weight of the object by weighing the correct sort destination containing the object.
- Sub 3/18

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5. The method of claim 1, wherein the generating a visual and/or audio command identifying the correct sort destination for the object is performed by illuminating an indicator near the correct sort destination.
6. The method of claim 1, further comprising the step of verifying that the object has been placed into the correct sort destination.
7. The method of claim 6, wherein the verifying step is performed using a photo sensor, motion detector, or scale.
8. The method of claim 6, further comprising the step of generating visual and/or audio commands if the object is not placed into the correct sort destination.
9. The method of claim 8, wherein the step of generating visual and/or audio commands is performed by illuminating an indicator near an incorrect sort destination into which the object was placed.
10. The method of claim 8, further comprising repeating the previous steps for each subsequent object.

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- 5 *Sub A2*
11. The method of claim 10, further comprising the steps of:
- recording when the object is placed in the correct sort destination;
  - recording when the object is placed in an incorrect sort destination;
  - recording when a sort is started and stopped; and
  - calculating, based on the recorded times, a sort rate, a sort idle time, a sort accuracy, and a total number of objects processed.

12. The method of claim 11, further comprising the steps of creating a record including the routing information for each object, the weight of each object, the sort rate, the sort accuracy, the idle time, the sort start and stop time, and the number of the objects processed.

- Sub A2*
13. The method of claim 12, further comprising the steps of:
- uploading the record to a database; and
  - transmitting data from the database to one or more of an object tracking database, a billing database, and a scan central server.

14. The method of claim 1, further comprising the step of capturing an operator's identity.

Sub 31 and  
15. The method of claim 1 wherein the determining routing information from the object information is performed by comparing the object information to a local or remote database that contains the routing information associated with the object information.

Sub A3  
16. An object sorting system comprising:  
a rack system comprising a plurality of sort destination modules, each sort destination module further comprising a sort destination for holding at least one object; and  
a management system comprising:  
a control system;  
an information capture device for reading machine-readable indicia from each object and for outputting the information to the control system; and  
an audio system and/or visual indicators for providing instructions to an operator.

17. The object sorting system of claim 16 wherein the sort destination modules further comprise at least one indicator identifying that an object should be placed in the sort destination and wherein the control system is capable of outputting a signal to the at least one indicator for each of the plurality of sort destination modules.

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18. The object sorting system of claim 16 wherein the sort destination modules further comprise at least one placement sensor for monitoring when an object is placed in the sort destination and wherein the control system is capable of inputting information from the at least one placement sensor for each of the plurality of sort destination modules and determining which sort destination the object was placed in and when the object was placed in the sort destination.

19. The object sorting system of claim 16 wherein the sort destination modules further comprise a scale for weighing the sort destination and wherein the control system is capable of inputting and recording the weight of the sort destination containing the object.

20. The object sorting system of claim 16 wherein the sort destination modules further comprise:

- at least one indicator identifying that an object should be placed in the sort destination;
- at least one placement sensor for monitoring when an object is placed in the sort destination; and
- a scale for weighing the sort destination;

wherein the control system is capable of:

- outputting a signal to the at least one indicator for each of the plurality of sort destination modules;

inputting information from the at least one placement sensor for each of the plurality of sort destination modules;

determining which sort destination the object was placed in and when the object was placed in the sort destination; and

inputting and recording the weight of the sort destination containing the object.

21. The object sorting system of claim 20 wherein the management system further comprises a user interface.

22. The object sorting system of claim 21, wherein the user interface is capable of being used to input an operator's identity and to output the operator's identity to the control system.

23. The object sorting system of claim 20 wherein each of the plurality of sort destination modules further comprises:

a crate placement sensor for monitoring whether a crate is within the sort destination, and

a second indicator for indicating when a crate should be changed based upon a predetermined parameter associated with the crate.

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24. The object sorting system of claim 23, the rack system further comprising:
- a controller area network bus for communicating with the control system and a controller area network addressing board; and
- a controller area network adaptor card for communication between the control system, the controller area network bus, and a plurality of interface boards.

25. The object sorting system of claim 24, wherein the controller area network adaptor card is capable of communicating with at least one of the plurality of interface boards and the controller area network bus, auto-terminating the bus, providing a unique node address for each of the plurality of interface boards, and distributing power to the interface boards.

26. The object sorting system of claim 25, wherein the controller area network adaptor card is capable of communicating with the interface boards, each interface board communicating with the first indicator, the second indicator, and the scale, and additionally capable through additional I/O ports to interface with the sort destination placement sensor and the object placement sensor.

27. The object sorting system of claim 26, wherein the interface boards communicate with the control system through the controller area network bus.

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28. The object sorting system of claim 20, the management system further comprising:  
an Ethernet connection for communication between the control system and at least one external device; and  
a serial port for communication between the control system and at least one diagnostic system.

29. The object sorting system of claim 20, where each placement sensor includes a proximity-type sensor.

30. The object sorting system of claim 20, where each of the first indicators are mounted near the front-side of each sort destination, and each of the second indicators are mounted near the back-side of each sort destination.

31. The method of claim 1, wherein the object information is captured as the object moves with mechanical assistance.

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